IN THE CLAIMS

Claims 1-2 (Cancelled):

Claim 3 (Currently Amended): ~~A method as claimed in claim 2, in which *a priori* likelihood input values related to a given transmitted symbol are not used for producing an estimation of said given transmitted symbol.~~

A method for receiving a signal transmitted by at least one antenna and received by at least one other antenna, comprising:

decoding a received symbol to produce at least one estimated symbol representative of at least one transmitted symbol embedded in the received signal, including:

estimating said at least one transmitted symbol based on a minimum mean square error calculation using an *a priori* likelihood input value for all possible transmitted symbols except said at least one transmitted symbol.

Claim 4 (Currently Amended): ~~A method as claimed in claim 2, in which an *a priori* likelihood input value related to a given bit forming part of a given transmitted symbol is not used for producing an estimation of said given transmitted symbol.~~

A method for receiving a signal transmitted by at least one antenna and received by at least one other antenna, comprising:

decoding a received symbol to produce at least one estimated symbol representative of at least one transmitted symbol, including:

estimating said at least one transmitted symbol based on a minimum mean square error calculation using an *a priori* likelihood input value for all bits of all possible transmitted symbols excluding a bit of said at least one transmitted symbol.

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Claims 5-6 (Cancelled):

Claim 7 (Currently Amended): ~~A device as claimed in claim 6, in which the symbol decoder includes filtering means intended to selectively discard *a priori* likelihood input values related to a given transmitted symbol when producing an estimation of said given transmitted symbol.~~

A receiver decoder for decoding a signal transmitted by at least one transmit antenna and received by at least one receive antenna, comprising:

a decoder configured to decode a received symbol to produce at least one estimated symbol representative of at least one transmitted symbol, said decoder including:

an estimator configured to estimate said at least one transmitted symbol based on a minimum mean square error calculation using an *a priori* likelihood input value for all possible transmitted symbols except said at least one transmitted symbol.

Claim 8 (Currently Amended): ~~A device as claimed in claim 6, in which the symbol decoder includes filtering means intended to selectively discard any *a priori* likelihood input value related to a given bit forming part of a given transmitted symbol when producing an estimation of said given transmitted symbol.~~

A receiver decoder for decoding a signal transmitted by at least one transmit antenna and received by at least one receive antenna, comprising:

a decoder configured to decode a received symbol to produce at least one estimated symbol representative of at least one transmitted symbol, said decoder including:

an estimator configured to estimate said at least one transmitted symbol based on a minimum mean square error calculation using an *a priori* likelihood input value for all bits of all possible transmitted symbols excluding a bit of said at least one transmitted symbol.

Claim 9 (Currently Amended): A telecommunication system, comprising:

a transmitter configured to transmit a plurality of transmitted signals; and

a receiver configured to receive said transmitted signals and including a decoder

configured to decode a received symbol to produce at least one estimated symbol

representative of at least one of said transmitted symbols, said decoder including an estimator

configured to estimate said at least one transmitted symbol based on a minimum mean square

error calculation using an *a priori* likelihood input value for all possible transmitted symbols

except said at least one transmitted symbol.

~~including at least one transmitter intended to output at least one signal transmitted by~~

~~means of at least one antenna, and at least one receiver intended to receive said signal by~~

~~means of at least one antenna, telecommunication system in which the receiver is a device~~

~~according to claim 6.~~

Claim 10 (New): A telecommunication system, comprising:

a transmitter configured to transmit a plurality of transmitted signals; and

a receiver configured to receive said transmitted signals and including a decoder

configured to decode a received symbol to produce at least one estimated symbol

representative of at least one of said transmitted symbols, said decoder including an estimator

configured to estimate said at least one transmitted symbol based on a minimum mean square

error calculation using an *a priori* likelihood input value for a bit of all possible transmitted

symbols excluding said at least one transmitted symbol.